

DISCUSSION OF THE AMENDMENT

Claim 1 has been amended by incorporating the subject matter of Claim 7 therein.

Claims 7 and 10 have been canceled. Claims 8 and 9 have been amended to depend on Claim 1. Claim 12 has been amended by deleting "MDF, HDF, chipboard," since colored board and electroconductive black board are species thereof. Compare to Claims 8 and 9.

No new matter is believed to have been added by the above amendment to the claims. With entry thereof, Claims 1-6, 8, 9, 11 and 12 will be pending in the application.

REMARKS

Due to the length of the specification herein, Applicants will cite to the paragraph number of the published patent application (PG Pub) of the present application, i.e., US 2006/0048675, when discussing the application description below, rather than to page and line of the specification as filed.

The rejection of Claims 1-12 under 35 U.S.C. § 103(a) as unpatentable over US 3,939,454 (Thornber et al) in view of US 6,503,317 (Ortalano et al), is respectfully traversed.

As described in the specification, the present invention is drawn to solving a problem of inability to obtain colored derived timber products such as HDF, MDF and chipboard having high brilliance, lightfastness and heatfastness [0009]. Applicants describe the disadvantages from using dyes [0005] and from using pigments [0006]-[0007], as well as a prior art preparation disclosed in EP 0 049 777 using both dyes and pigments, although dyes are used in excess, i.e., at least 30% by weight of dye, based on the pigment [0008].

The present invention successfully addresses the above problem. An embodiment thereof, as reflected in above-amended Claim 1, is a method for the decorative coloration of a product selected from the group consisting of MDF, HDF and chipboard, comprising applying a liquid colorant preparation that comprises at least one pigment and, based on the pigment, from 0.5% to 10% by weight of at least one dye to the product.

Thornber et al is drawn to a method for making colored particleboard using a water soluble dyestuff to color individual wood particles (column 1, line 19ff). Thornber et al is an example of the prior art alluded to above. Ortalano et al is drawn to an aqueous-based pigment dispersion containing pigment dispersed in a disperse dye (column 3, lines 47-50) for addition to printing ink, paint, pulp and paper, coatings and textiles for coloration purposes (column 1, lines 12-15). The Examiner holds, in effect, that it would have been

obvious to use the aqueous-based pigment dispersion of Ortalano et al to color the particleboard of Thornber et al.

Absent the present disclosure as a guide, one skilled in the art would not have combined Thornber et al and Ortalano et al. But even if combined, the result would not have been the claimed invention.

First of all, the Examiner has not established any relationship between the particleboard of Thornber et al and the paper of Ortalano et al such that one skilled in the art would look to the paper art for solutions to problems in coloring particleboard. Indeed, the Examiner has already acknowledged the steps--combining particles with a resin binder or adhesive to form a mattress followed by hot-pressing at elevated temperature and pressure--disclosed by Thornber et al for making particleboard.

To make pulp or paper, on the other hand, and as widely known, the wood fibers usually are processed to remove the lignin to give cellulose. (This procedure is not necessary in the manufacture of derived timber products.) The cellulose is then mixed with water, binder, optionally fillers and coloring agents to give a pulp usually containing about 99 wt% of water. The amount of binder is about 1 wt% based on the cellulose. Binders used in the manufacture of paper include alkenyl succinic acid, alkylated ketene dimere or chemically modified natural resins. The binders are mixed into the pulp to render the paper hydrophobic, making it possible to write on it. The binders do not serve as glue. The flowable pulp is processed further by casting on a sieve, dewatering, pressing and drying at temperatures of about 70-100°C.

Apart from the raw material, neither the end products nor the manufacturing processes, e.g., parameters like temperatures, pressures, water content, mechanical treatment, nor the chemicals used are the same in paper fabrication and in the production of derived

timber products. The coloring agents have to meet totally different requirements depending on the process in which they are to be used.

Second of all, one skilled in the art would not derive from Ortalano et al the use of coloring agents comprising pigment and only 0.5-10 wt.% of dye based on the pigment. Ortalano et al neither discloses nor suggests a particular concentration ratio of dye to pigment (other than the pigment is dispersed in the dye), let alone the small concentration ratio according to the present invention. Ortalano et al discloses aqueous based pigment compositions comprising 1 to about 50 wt% dye (column 5, lines 8-12) and 1 to about 50 wt% pigment (column 5, lines 54-58). Example 22 (column 9, lines 10-14) describes the pigment composition with the lowest content of dye in respect to the pigment. The coloring agent used contains about 6/26, or 23 wt% dye based on the pigment.

Indeed, it is very surprising and unexpected that the small amount of dye in the coloring pigment containing agent according to the present invention is sufficient to obtain the MDF, HDF and chipboard with the beneficial properties described in the specification herein [0169]. The physical explanation for the effect is that the dye is absorbed by the particles and covers the brownish-yellowish color inhered by the wood particles. The coverage of the inherent color of the wood particle together with the use of the pigments gives the MDF, HDF and chip boards with the brilliant and lightfast coloration according to the present invention.

For all the above reasons, it is respectfully requested that this rejection be withdrawn.

The rejections of Claims 1-12 under 35 U.S.C. § 112, first paragraph, as failing to comply with both the description and enablement requirements, are respectfully traversed. According to applicable US law and regulation, Applicants entering the national stage in the United States are required to file an English translation of the international application if the international application was filed in another application and was not published under PCT

Article 21(2) in English. Thus, the present national stage application is such an application. As confirmed in M.P.E.P. 1893.01(d), the translation **must** be a translation of the international application as filed or with any changes which have been properly accepted under PCT Rule 26 or any rectifications which have been properly accepted under PCT Rule 91 (emphasis added). Thus, if the German word “holzwerkstoffe” literally means “derived timber product”, then it is actually required that the change of “wood based material” to -- derived timber product--, be accepted. Nevertheless, the rejection is now moot in view of the above-discussed amendment, which deletes the term “derived timber product” from the claims. Accordingly, it is respectfully requested that this rejection be withdrawn.

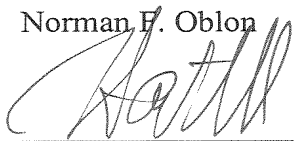
Finally, consistent with 37 CFR 1.56, prior public use has been alleged in an opposition against the corresponding EP-patent to the present application. The allegation relies on prior public use in Europe and EP 0 049 777, discussed *supra*. However, public prior use outside the USA is not patent-defeating according to US law. Nevertheless, copies of the filed evidence, labeled as D1 through D4, are **submitted herewith**.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon



Harris A. Pitlick
Registration No. 38,779

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

NFO/HAP:

D1

0473720150002

47372



NECAUSDRUCK

FERTIGUNGS-AUFTRAG

SEITE: 0001

EPO - DG 1

12.02.2007

(102)

PRODUKT NR./PROJEKT-NUMMERUNG 0150002 GEF 200A		REZEPT-VARIANTE P004		DRUCK-DATUM 2/08/00		CHARGEN-NR. 47372		LIEFER-TERMIN 11/08/00		AUFTRAGS-NR. 47372	
HOLZLEISTE KUSCHEN-MITTEL KRAF											
FERTIG-MENGE 500	MAß/CUT-VOL. 0	BEHÄLT.-GEWICHT 1.046	VOR-CODE F.W.	RES.-GEFÄHRE L80	2/P LAG L80	FERTIGSTELLUNG/GRABIT 9.8.2000-820		GESAMT-MENGE 5007			
REZEPT-GRÜNDE 5207		ANMERKUNGEN P		ANFORDERUNGEN		UNTERSCHRIFT H. H. H.					
START-KOSTEN 38801											
MATERIAL-NR.		MATERIAL-BEZEICHNUNG		REZEPTVORGABE		KLEMMAGE		RES.		CHARGEN-NR.	
				KG LITER				CEPA.			
		GERÄTE KUSCHEN BAUER UND LERER GEF MIT KUSCHENGERÄTE VERMINDER BESTANDSMITTEL: KESSELKUGELN VORLAGEN									
M225H	✓	✓	SYNCHRONIS T-GE	.565		✓				00010459	
M202C	✓	✓	SYNCHRONIS GE-GE	.185		✓				00010460	
M243H	✓	✓	SYNCHRONISER TE-GE	.175		✓				00010461	
A0027	✓	✓	SPEZIALKUGELN KRAF 4*33	.460		✓				00010462	
A0435	✓	✓	SICOMIT ANBAUER 65 E 123	.080		✓				00010463	
29434	✓	✓	POTTSCHKE	4.000		✓		12		00010464	
M2224	✓	✓	UNTER E 2885 4*24	27.600		✓				00010465	
M2225	✓	✓	SICOMIT-GRÖßE 81-0010 4*26	1.000		✓				00010466	
✓	✓	✓	DANE KUGELN VOR KUGELN KUGELN AUF 80 GRAD C	328.435		✓				✓	
L1742	✓	✓	WASCHEN STÄNDIGKEIT 20 MINUTEN KUGELN			✓				✓	
✓	✓	✓	ANBAUER AUF 36.0 GRAD C/KUGELN DANE KUGELN			✓				✓	
24494	✓	✓	BALENGELIST 0.91	25.000		✓		C		00010467	
29756	✓	✓	PREVENTOL CHE-NA SCHUPPEN	.500		✓		C		00010468	
2329C	✓	✓	HOWLETH DC. 562	40.000		✓				00010469	
L1091	✓	✓	SUPPLIMENT	2.000		✓		12		00010470	
✓	✓	✓	15 MINUTEN KUGELN			✓				P. 8.00	
✓	✓	✓	WIEGEMASCHINE VERFÜGBAR			✓				H. H. H.	

D2

NORDWAL AG-SPR
Nordwal AG/SpA - Nazionale 63 via Nazionale - I-28040 ALESSANDRIA (AZ)
voll einget. Handelsges. - cap. soc. int. versetzt € 500.000
Matrik. Nr./Part. LVA. 001281/20219

Nr. 260 S. 1

nordwal

FAX

fax 0471.810884 Verkauf/vendita - fax 0471.810297 Buchhaltung/contabilità

tel. 0471.810259
E-Mail: nordwal@dnst.it

für/per: ZWEIHORN GMBH

fax:

z.H./att.: g. Frau Albrecht

Datum/da: 0.11.2000

fax nr.: 1619

Seitenanz./nr. pag.: 1

960303
233722

BESTELLUNG

4 x 5 Ltr. OKF 2004
4 x 5 Ltr. OKF 2078
4 x 5 Ltr. WXF 1200
20 x 5 Ltr. PBF 2314
20 x 5 Ltr. PBF 2352
12 x 0,5 Ltr. CK 05 braun
20 x 25 Ltr. CL 9
20 x 25 Ltr. CL 0
10 x 10 Ltr. WL 6020
30 x 2,5 Ltr. Härter 5085
10 x 10 Ltr. IF-Füller
20 x 3 Ltr. IF-Füller
4 x 5 Ltr. S 7000
6,2 x 2,5 Ltr. S 7777
12 x 2,5 Ltr. HL 2000/3
30 x 1 Ltr. HL 2000/0
6 x 0,5 Kg 2K Holzspachtel CHS
2 Schachtelein à 14 Stück CWW 06
2 Schachtelein à 14 Stück CWW 07
40 Stück LGO WW 3 - Leergebinde 3 Liter - innenlackiert für WL
1 Kg Nussbaumkörbebeize 41485/1 als kostenloses Muster ✓
1x CRK R.P.H. ROLL

Rückstände:

~~40 x 30 Ltr. SDF/A~~
~~14 x 25 Ltr. WGF/RAL 9016~~
~~40 x 5 Ltr. S 9999WA/4030~~
~~5 x 1 Ltr. Patinapaste nach RAL 8024~~

Auslieferung: sobald als möglich!

Freundliche Grüße

B. Röll
nordwal ag/B. Röll

DM 14681,39
7% WR = DM 1027,69
5% SR = DM 734,07

EPO - DG 1

12.02.2007

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Zweihorn GmbH
Ein Unternehmen der ICI-Gruppe

RECHNUNGSKOPIE

USt-IdNr./VAT-Reg.No. DE812578011

Geschäftsbereich Business Area Vertreter Sales Representative		Zweihorn ZH-Italien		Vertreter-Nr. Sales rep.		777000		Seite Page		1									
Rechnungsadresse Invoice Address				Rechnungs-Nr. Invoice No.		233722		Rechnungsdatum Invoice				22/11/00							
NORDVAL AG VIA NAZIONALE 63 I 39040 GRA/BZ ITALIEN				Lieferadresse Consignee Address NORDVAL AG VIA NAZIONALE 63 I 39040 GRA/BZ ITALIEN															
Kunden VAT.No.				IT 00128120219															
Bestell-Nr. Customer Order No.		1619/1621		ICL-Auftrags-Nr. ICI Order No.		960303		Lager Dispatch Point		95		Bereich Cost Centre		09015		Versandart Transport mode		Spedition	
Kunden-Nr. Sales Reference No.		340062		Lieferschein-Nr. Delivery note no.		233722		Auftragsdatum Order date		22/11/00		Lieferdatum Delivery date		22/11/00					
Pos. ITEM	Artikeldescription Product description			Einheit Unit	Menge Quantity	Preis Price	PE Unit	Netto Discount	Betrag Total										
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3	WOF 1200;5 WACHEBEIZE Art.klass.code 32041900			KSL	4	20.0	6.10	LT		122.00									
4	PBF 2314;5 POSITIV-FERTIGBEIZE Art.klass.code 32041900			KSL	20	100.0	6.92	LT		692.00									
5	PBF 2352;5 POSITIV-FERTIGBEIZE Art.klass.code 32041900			KSL	20	100.0	6.92	LT		692.00									
6	CR 06;5 COLOR KONGESTRAT BRACH Art.klass.code 64139000				12	12.0	10.88	ST		130.56									
7	CL 9;25 CRYSTALLIT BECKENKRAFT Art.klass.code 32081010			K25L	20	500.0	6.16	LT		3080.00									
8	CL 0;25 CRYSTALLIT KRAFT			K25L	20	500.0	6.16	LT		3080.00									
Nettoprodukt product value				VAT rate		VAT-Betrag VAT total		Rechnungsbetrag Total Invoice											
Zahlungsbedingungen Payment conditions				Betrag Amount				Fälligkeit Due date											

Erklärung der Verkaufs- und Lieferbedingungen sowie Kennzeichnung siehe Rückseite

Zweihorn GmbH
Dörmelstraße 4a-102
D-60711 Köln
KONTAKTNUMMER
Ausgangspunkt Lagerfeld HEB 144

Ordnungsbefehl
Bestellnummer
Name Programm

Telefon (021 2) 77800
Telefax (021 2) 69 7734
Telegraphen-Adresse 6414

BANKEN
Commerzbank AG, Köln, Konto 6 562 003
(BLZ 300 600 00)

EPO - DG 1

12.02.2007

102

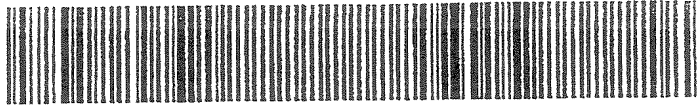
D4

EPO - DG 1

0579280150002

57928

12.02.2007



102

NEUAUSDRUCK

FERTIGUNGS-AUFTRAG

SEITE: 0001

PRODUKT-NR./PRODUKT-BEZEICHNUNG 0150002 OKF 2004 HOLZBEIWE NUSSEBAUM-MITTEL KRAF			REZEPT-VERSION P004	DRUCK-DATUM 25/07/01	CHARGEN-NR. 57928	LIEFER-TERMIN 3/08/01	AUFTRAGS-NR. 57928
FERTIG-MENGE 310	MAHLGUT-VOL 0	SPEZIF.-GEWICHT 11042 FLO	VDF-CODE Entf.	RES.-GEFAHREN L80	FREIGABEDATUM/ZEITSTAMP 31.7.2004 10:00	GESAMT-MERGE 294	
NETTO-GEWICHT 294.5	AUSBEUTE	KORREKTUR	ABFÜLLBECKEN K-1	UNTERSCHRIFT B. Steinbof			
START KOSTELLE 38801							
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				KG	LITER		GEFA.
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M225E ✓	SYNCOCKLE T-SH			0.350		✓	01050204
M202C ✓	SYNCOCKLE T-SH			0.115		✓	01030341
M243H ✓	SYNCOCKLE T-SH			0.109		✓	00030438
A0027 ✓	SPEZIALNIGROSIN WLAH **23			0.285		✓	01030436
A0435 ✓	SICOVIT AMARANTE 85 E 123			0.050		✓	01030463
Z9434 ✓	POTTASCH			2.480		✓	01070562
M2224 ✓	UMERA E 2885 W			17.112		✓	01010405
M2225 ✓	SICOMIX-GRUEN 81-0010 **ES			0.620		✓	99060356
L1742 ✓	DANN ZUGEBEN VOR ZUGABE ERWARMEN AUF 80 GRAD C WASSER STAEDTISCHE			247.030		✓	11
	20 MINUTEN RUEHREN						
	ABKUEHLEN AUF 30.0 GRAD CELSIUS						
	DANN ZUGEBEN						
Z4494 ✓	SALMARGELST 0.91			15.500		✓	c
Z9756 ✓	PREVENTOL CMR-NA SCHUPPEN			0.310		✓	c
R329C ✓	MOWILITH DC, 56%			24.800		✓	01050306
L1091 ✓	BUTYLGLYKOL			1.240		✓	11
	15 MINUTEN RUEHREN					✓	
	PRUEFFPLAN SIEHE PRUEFFARTE						

$$\frac{\text{Dye}}{\text{Pigment}} = \frac{0,909 \text{ kg}}{17,732 \text{ kg}} = 5,12 \%$$

32.02.01
Steinbof